



Progress Report on the Tsunami Detector System

April 15, 1998

- The west coast system was recovered in February, 1998 with the RV WECOMA before complete failure.
- Careful evaluation disclosed the data transmission problem was caused by a break in the transducer cable near the hydrophone at 90 meters depth.
- Extensive evaluation of the data from the two systems deployed in 1997 did not disclose any correlation between data "drop-outs" and environmental conditions. Background noise (which was not measured) may have caused variations in the signal to noise ratio.
- An inductive modem system to eliminate the transducer cable in future systems has been designed and tested in Puget Sound.
- Upgraded CPU and PC card interface boards have been designed, fabricated, and tested. New power regulation and communication circuits will operate at lower voltage and provide more reliable telemetry.
- A new version of the acoustic modem which will operate at 8-13 kHz (vs. 16-20 kHz), use more complex coding, and provide acoustic channel diagnostic data has been ordered. Preliminary lab testing produced encouraging results.
- A field test of acoustic and inductive modems was completed in April from the RV MOANA WAVE in 4500 meters of water near Hawaii. Several failure modes of the acoustic modems were observed and changes at the manufacturer are being made.
- Two new surface buoys have been fabricated and are being outfitted.